

### **REMARKS/ARGUMENTS**

The claims now pending in this application are Claims 1, 12-15, 19 and 20. All claims are rejected. The Action was made FINAL. No references were cited.

#### **General Items**

Before addressing the specifics of the rejections raised in the Office Action and discussed below, Applicants wish to note several matters.

Applicants' attorney received this Office Action on Monday, March 14, 2005, and has tried to respond as possible within these time constraints by March 16, 2005. The reason for such short notice is that The Dow Chemical Company has now sold and assigned all of its rights to this application (along with many others) to Dendritic Nanotechnologies, Inc. Therefore Applicants have provided a new Power of Attorney and Correspondence Address Indication Form and respectfully request that the Office note the new Attorney's reference number, address, and telephone for further communication on this application. A Statement under 37 CFR 3.73(b) is provided to indicate this change in assignment together with a copy of the fully executed assignment (which was received March 15, 2005). This new assignment will be recorded very soon.

Dendritic Nanotechnologies, Inc. qualifies as a Small Entity and as such those fees have been authorized. Because the assignment is not yet recorded, Applicants are uncertain what fee structure pertains for this Response as The Dow Chemical Company is a Large Entity. However, the Small Entity fees are used on the enclosed papers. If any adjustments for fees are required, this letter authorizes them to be charged to our Deposit Account No. 503384.

Because the Applicants have only now been able to respond to this application, a Declaration is submitted by Dr. Donald A. Tomalia, an employee of Dendritic Nanotechnologies, Inc. Applicants respectfully request that the Examiner permit this Declaration submitted after Final for these reasons.

Rejection under 35 USC 112, Second Paragraph

All Claims

The cisplatin or carboplatin may be present on the surface of the dendrimer as indicated by earlier cases in this series that have now issued. It was believed by the inventors, Ruth Duncan and Navid Malik that the surface location was the most likely location for the cisplatin and they illustrated that by original Figures 10A and 10B.

However, this continuation-in-part application was filed to include the later learned fact of the higher loading of the cisplatin in the interior of the dendrimer when a surface of carboxylate groups are present. To further explain this fact a Declaration by Dr. Donald A. Tomalia, one of the present inventors, more clearly shows how this conclusion was reached. It is well known in the dendrimer art that the interior has void spaces and thus it is only whether the cisplatin can enter this space. It was surprisingly found that when the dendrimer surface is a carboxylate group, then there appears to be an ionic shunt mechanism that leads the cisplatin into the interior. This additional interior space is more available when the dendrimer surface has carboxylate groups present rather than the amino groups on the surface which had been used earlier. The additional cisplatin that can be loaded is significant and leads to a higher therapeutic dose making this a better drug delivery system. This result can be seen by reviewing Examples 7 through 11.

Applicants believe that sufficient teaching and enablement exists in the specification as filed for the claims. Applicants respectfully request that this rejection under 35 USC 112, second paragraph, be removed.

Rejection under 35 USC 112, First Paragraph

All Claims

The presently amended claims are restricted to a dendritic polymer that is a poly(amidoamine)dendrimer having carboxylate functional groups, wherein the antineoplastic agent is cisplatin or carboplatin and is encapsulated within the dendritic polymer, wherein the percent by weight of platinum in the conjugate is at least about

16%, wherein the antineoplastic dendritic polymer conjugate has a therapeutic effect on malignant tumors. Support for the present amendment of Claim 1 is found at page 16, lines 16-17 (25 wt%), page 22, lines 27-28 (25 wt% and 40 wt%), page 23, line 15 (20.47 wt%), page 24, lines 2 (19.25, 16.82, 16.81 wt%), 7 (16.81 wt%) and 26 (5.81, 19.25, 20.26 wt %) as well as other locations.

Applicants have shown how to make these carboxylate surface dendrimers in the Examples as filed. It is not unreasonable to assume that carboplatin will behave in a manner like cisplatin. These are now the only two antineoplastic agents claimed. The dendrimer is also restricted to poly(amidoamine)dendrimers with a carboxylate surface. Thus Applicants believe that one skilled in this art would not have a difficulty in duplicating these results.

The objection to 157% (error) has been overcome by reference to the Examples, especially page 24, line 2 supports the 16% lower limit.

Applicants respectfully request that this rejection under 35 USC 112, first paragraph, be removed.

#### New Matter Rejection for Figure

The figure submitted with the Response mailed June 2, 2004 was intended to aid the Examiner to better understand this invention for encapsulation. Applicants did not request that the figure be added to the specification figures. Thus the new matter rejection seems moot. The figure need not be a part of this Response except that it is now submitted as a portion of the Figures with the Tomalia Declaration. Thus Applicants believe that the Declaration and its attachment are proper in form and not new matter.

#### Conclusion

In the present application Applicants have demonstrated with the above Remarks/Arguments and Declaration that the present amended claims are supported and enabled, and that one skilled in this dendrimer art could make these conjugates using the teachings of this application as presently filed. The claims have been further

amended to reflect the teachings as filed. Therefore, Applicants respectfully request the removal of all rejections and objections and request the allowance of this application.

Applicants request that if there are issues remaining unresolved regarding any issues raised by this Action that an interview by telephone or in person be granted to expedite allowance of this application.

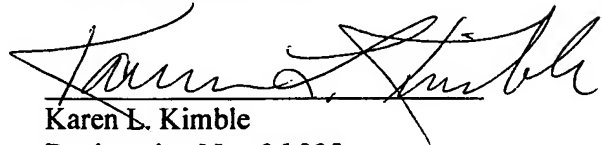
Notice of Appeal

To preserve Applicants' rights, a Notice of Appeal is provided together with any required fee that is hereby authorized to be charged to our Deposit Account No. 503384.

Fees

In the event that any other fees are due for this Response or attachment which have not been included, those fees are authorized to be charged to our Deposit Account No. 503384. Applicants' attorney is uncertain whether a fee is due under 37 CFR 1.129(a) of \$395 for a Small Entity. If this fee is due, it is also authorized to be charged to our Deposit Account No. 503384. If any overpayment has been made, please credit our Deposit Account No. 503384.

Respectfully submitted,



Karen L. Kimble  
Registration No. 26,995  
Phone: 989-687-7401

Enclosures: Response after Final  
Declaration  
Petition for Extension of Time - 2  
Notice of Appeal - 2  
Certificate of Express Mailing  
Power of Attorney and correspondence Address Indication Form  
Statement under 37 CFR 3.73(b)  
Copy of Assignment  
Post Card